



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,623	03/31/2001	Norman Van Den Bussche	H0001537	6960

128 7590 06/04/2003

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 06/04/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/823,623	Applicant(s) BUSSCHE ET AL.	
	Examiner Hien Tran	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-18 in Paper No. 5 is acknowledged. The traversal is on the ground(s) that no serious burden has shown to search for claims 19-21 and claims 19-21 have the same classification (422) as claims 1-18. This is persuasive and the restriction with respect to claims 1-21 has been withdrawn. However, applicants argues that with respect to claim 22, the examiner would not have to perform a separate search and would not be seriously burdened by the examination of only one claim, is not found persuasive because the search for the apparatus is not the same as that of the method claims.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "210" (page 7, line 14). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which

Art Unit: 1764

applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

5. The disclosure is objected to because of the following informalities:

On page 1, line 4 --, now abandoned-- should be inserted after "1998".

On page 5, line 19 "Noble" should be changed to --noble--.

On page 6, line 2 one of the two periods after "effective" should be deleted.

Appropriate correction is required.

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

7. Claims 14 and 17 are objected to because of the following informalities:

In claim 14, line 2 "Noble" should be changed to --noble--. See claim 17 likewise.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 9, 12, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1764

In claim 9, it appears that the claim is directed to method limitation which renders the claim vague and indefinite since it is unclear as to what structural limitation applicants are attempting to recite.

In claim 12, it is unclear as to what applicants are attempting to recite since the claim does not clearly set forth the metes and bounds of the patent protection desired.

Claim 18 provides for the use of the filter but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

In claim 18, lines 1-2 "the first and second vessels" lack positive antecedent basis.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 4, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Stiles et al (5,362,463).

Stiles et al discloses an apparatus comprising: a source of NO_x gas; filter material including a catalyst, such as manganese oxide and copper oxide, etc., and an alkali, such as potassium carbonate, for reducing levels of NO_x in the gas wherein the alkali is coated on the particles of the catalyst (col. 5, lines 28-50; col. 6, lines 14-31).

Instant claims 1, 4, 13 structurally read on the apparatus of Stiles et al.

Art Unit: 1764

12. Claims 1, 3, 5, 8, 14, are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al (5,849,254).

Suzuki et al discloses an apparatus comprising: a source of NO_x gas; filter material including a catalyst, such as manganese oxide and copper oxide, etc., and an alkali metal for reducing levels of NO_x in the gas (col. 2, lines 39-48; col. 6, lines 49-67; Figs. 2, 3).

Instant claims 1, 3, 5, 8, 14 structurally read on the apparatus of Suzuki et al.

13. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07-000743.

JP 07-000743 discloses an apparatus comprising: a source of NO_x gas; filter material including a catalyst, such as manganese oxide, copper oxide, etc., and a carbonate of alkali for reducing levels of NO_x in the gas (abstract).

Instant claims 1-2 structurally read on the apparatus of JP 07-000743.

14. Claims 1, 4, 6-10, 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cole (5,656,244).

Cole discloses an apparatus comprising: a source of NO_x gas; filter material including a catalyst, such as manganese oxide and copper oxide, chromium oxide, etc., and an alkali metal, such as potassium carbonate for reducing levels of NO_x in the gas (col. 5, lines 17-38). Cole further discloses means for promoting heat transfer from the exhaust to the catalyst material 28, in which said means are downstream of the filter material 30 (col. 6, lines 63-65). Cole discloses a first support for the catalyst and a second support for the sorbent, the first and second support being spaced apart (Figs. 1-2). As best understood, since the two supports for the catalyst and sorbent are spaced apart, they are inherently independent optimized. Cole discloses that the sorbent with the catalyst and the noble catalyst are integrated in a housing (Figs. 2A, 2B)

Art Unit: 1764

Instant claims 1, 4, 6-10, 12-18 structurally read on the apparatus of Cole.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. The art area applicable to the instant invention is that of NOx filter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re*

Art Unit: 1764

Clinton 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

18. Claims 9, 11-12, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole (5,656,244).

The apparatus of Cole is substantially the same as that of the instant claim, but fails to disclose the specific location for the air conditioning system or the order of the catalysts and sorbent as claimed.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select an appropriate location for the air conditioning system, or the appropriate order for the catalysts and sorbent in the apparatus of Cole on the basis of its suitability for the intended use as a matter of obvious design choice and since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Since it is unclear as to what applicants are attempting to recite as set forth above, as best understood, the catalyst and sorbent in the apparatus of Cole are spaced apart with the means for promoting heat transfer therein, they are inherently operated at different temperature and pressure. Even if not, select an appropriate operating condition for the two parts of the system is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the system.

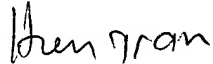
Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT
May 30, 2003


Hien Tran
Primary Examiner
Art Unit 1764